



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,225	07/23/2003	Martin Forrer	600.1237	8610
23280	7590	08/20/2004	EXAMINER	
DAVIDSON, DAVIDSON & KAPPEL, LLC 485 SEVENTH AVENUE, 14TH FLOOR NEW YORK, NY 10018			SCHWARTZ, JORDAN MARC	
			ART UNIT	PAPER NUMBER
			2873	

DATE MAILED: 08/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,225

Applicant(s)

FORRER ET AL.

Examiner

Jordan M. Schwartz

Art Unit

2873



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-25 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/23/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION***Priority***

Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119 as follows: applicant has claimed priority to document number 102 33 491 in the declaration, first paragraph of the specification, and in a cover letter claiming priority, however, the certified copy provided is to document number 102 33 491.1 re a different document number. It is not clear if applicant has claimed priority to the wrong document number or if the certified copy provided is to the wrong document. In either case, applicant has not claimed priority and provided a certified copy to the same document and therefore has not complied with the provisions of 35 U.S.C. 119.

Information Disclosure Statement

The information disclosure statement filed July 23, 2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. Specifically, applicant has not provided a copy of EP document number 1107039 and therefore this reference has been crossed out on the IDS and has not been considered.

The information disclosure statement filed July 23, 2003 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent

Art Unit: 2873

listed that is not in the English language. Specifically, applicant has not provided a concise explanation of the relevance of EP document number 1107039 and therefore this reference has been crossed out on the IDS and has not been considered.

Specification

The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

Specifically, on page 12 of the specification, applicant states that German document number DE 100 31 915 A1 is incorporated by reference, which is improper.

Claim Rejections - 35 USC § 112

Claims 1-7, 11, 13-14, 16-18, 21 and 24 (and dependent claims 15, 19 and 25) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2873

With respect to claims 1-7, 11, 13-14, 16-18 and 24 that part of the claim stating "a macro-optical system" renders these claims vague and indefinite. Specifically, macro-optical systems, as opposed to micro-optical systems, is typically a term of art referring to optical systems having optical elements of a specific size. However, reading the claim in light of the specification, on page 1 (paragraph 0004) of the specification it is stated that "a part of the imaging optics is intended for globally projecting the number of light sources to an image spot with as few defects as possible. In the context of description, this part is referred to as "macro-optics" or "macro-optical system"". Applicant states "in the context of description" and has not clearly stated that "the term macro-optical system is herein defined as ..." or similar clear language and therefore it is not clear if applicant is attempting to provide a special definition to this term. Therefore, it is not clear if applicant is using the term "macro-optical system" to mean an optical system having optical elements of a specific size or if applicant is attempting to apply a special definition to this term to mean "imaging optics for globally projecting a number of light sources to an image spot with as few defects as possible". The lack of clarity renders these claims vague and indefinite. In further reference to these claims, if the later is the intended meaning, it is not clear as to what is meant by "for globally projecting" and "with as few defects as possible" which terminology further renders the claims vague and indefinite. Specifically, it is not known what is meant by "for globally projecting" and any optical system will inherently attempt to provide as few defects as possible. For all of the

Art Unit: 2873

aforementioned, the intended meaning of “macro-optical system” is not clear rendering these claims vague and indefinite.

With further respect to claim 5, that part of the claim stating, “at least one mirror associated with the macro-optical system” renders the claim vague and indefinite. It is not clear if “associated with” is intended to mean within the macro-optical system (the assumed meaning) or if some other meaning is intended.

With respect to claim 21, that part of the claim stating “n being relatively prime to the number (a/p)” renders the claim vague and indefinite and it is not clear as to applicant’s intended meaning. The assumed meaning is “n being determined by the value of a/p”.

Claim Objections

Claims 4, 6 and 21 are objected to because of the following informalities. Appropriate correction is required.

With respect to claim 4, line 1, “wherein macro-optic system” should be corrected to “wherein the macro-optic system” to correct an inadvertent error. “has a first principal plane and a second principal plane located”

With respect to claim 6, “at least adaptive optic part” should be corrected to “at least one adaptive optic part” to correct an inadvertent error.

With respect to claim 21, line 1, “og” should be corrected to “of” to correct a typographical error.

Claim 4 is objected to for the following reason. Since the intended meaning could be determined from the specification and the Figures, a 112

Art Unit: 2873

rejection was not made but instead this lack of clarity issue is raised in the following claim objection.

With respect to claim 4, "has a first principal plane and a second principal plane located" should be corrected to "has a first principal plane and a second principal plane both located" to provide clarity to the intended meaning.

Specifically, that the intended meaning is that both planes are located on one side of the macro-optical system as opposed to claiming that the system has two principal planes but just the second principal plane is located on one side of the macro-optical system.

Claim 25 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Specifically, the only additional limitation is "further comprising imaging the printed form" which is already claimed in claim 24 from which claim 25 depends.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under

Art Unit: 2873

the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 8-9, 11-12, 14, 17 and 22-23 are rejected under 35

U.S.C. 102(b) as being anticipated by Suzuki patent number 6,172,788.

Suzuki reads on these claims by disclosing the limitations therein including the following: a device for imaging a printing form (column 1, lines 14-29); a plurality of light sources (Figure 1, column 1, lines 14-30, column 18, line 21); imaging optics for producing a plurality of image spots of the light sources on the printing form (Figure 1); the imaging optics including at least one macro-optical system having refractive optical components (to the extent the term "macro-optical system is understood, Figure 1, elements "22-26"); wherein the optical path from the light source to the image spots passes through the macro-optical system twice (Figure 1, column 20, lines 39-54); the optical path off-axis from the optical axis (Figure 1); the optical path running symmetrical to the optical axis (Figure 1). It is believed that both the first and second principal planes of Suzuki will be located on one side of the macro-optical system, this being reasonably based upon what is shown in Figure 1. Suzuki further discloses at least one mirror within the macro-optical system (Figure 1, "22"); the light sources as individually addressable diode lasers (Figure 1, column 18, line 9); the system including a micro-optical system downstream of the light sources and upstream of the macro-optical system (Figure 1 re elements "14a, 16a, 18a" disclosed in Figure 1 as "micro"). It is believed that the micro-optical system of Suzuki is inherently allowing beam diameters emerging to be influenced independently of

Art Unit: 2873

each other in two orthogonal axis, this being reasonably based upon Suzuki disclosing these micro-optical elements being used for imaging in both a scanning and sub-scanning direction (column 25, line 35 to column 28, line 28). Suzuki further discloses at least one light deflecting element providing the coupling as claimed (Figure 1, element "22" coupling the light from light sources "12a" and "12b" through the macro-optical system) The macro-optical system of Suzuki will inherently be able to provide 1:1 imaging, this being reasonably based upon Suzuki disclosing the system for use in printers and copiers (column 1, lines 14-30).

Claims 1-7, 11, 17, 22-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishibe publication number 2001/0026391.

Ishibe reads on these claims by disclosing the limitations therein including the following: a device for imaging a printing form (paragraphs 0002 and 0004); a plurality of light sources (paragraph 0037); imaging optics for producing a plurality of image spots of the light sources on the printing form (Figures 1 and 2); the imaging optics including at least one macro-optical system having refractive optical components (to the extent the term "macro-optical system is understood, Figure 1, elements 6, 11a, 11b, and 12); wherein the optical path from the light source to the image spots passes through the macro-optical system twice (Figures 1-2); the optical path off-axis from the optical axis (Figures 1-2); the optical path running symmetrical to the optical axis (Figures 1-2). It is believed that both the first and second principal planes of Ishibe will be located on one side of the macro-optical system, this being reasonably based upon what is

Art Unit: 2873

shown in Figures 1 and 2. Ishibe further discloses at least one mirror within the macro-optical system (Figures 1 and 2, "6"); at least one adaptive optic part (paragraphs 0088 and 0164); the macro-optical system including at least one moveable lens (paragraphs 0101, 0150-0152); the system including a micro-optical system downstream of the light sources and upstream of the macro-optical system (Figure 1 re elements 2a, 2b, and 4 disclosed in Figure 1 as "micro"). The macro-optical system of Ishibe will inherently be able to provide 1:1 imaging, this being reasonably based upon Ishibe disclosing the system for use in printers and copiers (paragraphs 0004 and 0083). Ishibe further discloses the device as a method changing a relative image spot with respect to a position of a printing form (paragraph 0174).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibe in view of Konnunaho et al.

Ishibe discloses as is set forth above including the device providing light scanning in a printer or copier (paragraph 0002 and 0004) and the device using a plurality of light sources (paragraph 0037) but does not specifically disclose the light sources as individually addressable lasers such as either diode or solid

Art Unit: 2873

lasers and the lasers integrated on a bar. Konnunaho teaches that in a printer apparatus it is desirable to use individually addressable lasers, specifically diode laser bars for the purpose of improving the printing speed (column 1, lines 40-56). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the light sources of Ishibe as individually addressable lasers such as either diode or solid lasers and the lasers integrated on a bar since Konnunaho teaches that in a printer apparatus it is desirable to use individually addressable lasers, specifically diode laser bars for the purpose of improving the printing speed. It is believed that the micro-optical system of Ishibe is inherently allowing beam diameters emerging to be influenced independently of each other in two orthogonal axes, this being reasonably based upon Ishibe disclosing these micro-optical elements being used for imaging in both a scanning and sub-scanning direction (paragraphs 0083 to 0093).

Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al or Ishibe in view of Chandler et al.

Suzuki et al and Ishibe disclose as is set forth above including the device providing light scanning in a printer or copier as stated in the rejections above but do not specifically disclose the printer comprising a zoom lens system with at least two lenses downstream as claimed. Chandler et al teaches that in a printing apparatus it is desirable to further include a zoom lens system with two lenses downstream as claimed for the purpose of adjusting the beam size (Figures 1 and 2, column 4, lines 30-55). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the printer

Art Unit: 2873

apparatus of either Suzuki et al or Ishibe as further comprising a zoom lens system with two lenses downstream as claimed since Chandler et al teaches that in a printing apparatus it is desirable to further include a zoom lens system with two lenses downstream as claimed for the purpose of adjusting the beam size.

Prior Art Citations

Zelenka is being cited herein to show a device and method having some similar characteristics and method steps to that of the claimed invention.

Allowable Subject Matter

Claims 13, 15-16 and 21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: with respect to the allowable subject matter, none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103. Specifically, with reference to claim 13, none of the prior art either alone or in combination, disclose or teach of the claimed device for imaging a printing form specifically including, as the distinguishing feature in combination with the other limitations, the claimed micro-optical system producing a virtual intermediate image projected by the macro-optical system. Specifically, with reference to claim 15,

Art Unit: 2873

none of the prior art either alone or in combination, disclose or teach of the claimed device for imaging a printing form specifically including, as the distinguishing feature in combination with the other limitations, the light deflecting element that is providing the coupling as claimed as being a Porro prism.

Specifically, with reference to claim 16, none of the prior art either alone or in combination, disclose or teach of the claimed device for imaging a printing form specifically including, as the distinguishing feature in combination with the other limitations, the macro-optical system as telecentric on both sides. Specifically, with reference to claims 20-21, none of the prior art either alone or in combination, disclose or teach of the claimed device for imaging a printing form specifically including, as the distinguishing feature in combination with the other limitations, the image spots having the distances as determined by claim 20.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number is (571) 272-2337. The examiner can normally be reached on Monday to Friday (8:00-5:30), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached at (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2873

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'J. Schwartz', with a large, stylized loop at the end.

Jordan M. Schwartz
Primary Examiner
Art Unit 2873
August 18, 2004